



# WALTZ OF THE WIZARD:

comparing the room-scale VR platforms  
Steam and Oculus Home

PUBLICATION: X94R3U8-002



## ABOUT THIS REPORT

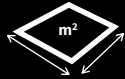
This report compares differences in audience and usage for **Steam VR** and **Oculus Home** releases of *Waltz of the Wizard*, based on anonymous usage data collected using [Ghostline](#) analytics in April 2017. The report is being released to help inform the broader VR development community of how VR hardware and platform capabilities can impact user experience and content functionality.

## ABOUT WALTZ OF THE WIZARD

*Waltz of the Wizard* is a virtual reality experience created by Aldin Dynamics that lets players feel what it's like to have magical powers. Players combine arcane ingredients into a boiling cauldron with the help of an ancient spirit trapped in a human skull, unleashing creative and destructive wizardry upon a fully interactive virtual world. The experience also allows players to travel to new places, finding themselves in mysterious circumstances full of detail and unforgettable atmosphere. *Waltz of the Wizard* is classified as compatible with standing play area setups, although it will be noted that it is designed for room-scale.

Originally designed for the HTC VIVE and released on Steam on May 31st 2016, *Waltz of the Wizard* has remained among the top 3 highest rated VR applications on Steam since December 2016. The experience was released on the Oculus Home platform with native integration for the Oculus Touch controllers on March 27th 2017.

# INTERESTING FINDINGS



AVERAGE STEAM PLAY AREAS  
ARE **5.7M<sup>2</sup>** COMPARED TO  
**3.3M<sup>2</sup>** ON OCULUS  
(PAGE 5)



THE NVIDIA GTX 1070 IS THE MOST  
POPULAR GPU ON BOTH STEAM (**27%**)  
AND OCULUS (**19%**)  
(PAGE 7)



**36%** OF STEAM PLAYERS USE PLAY  
AREAS LARGER THAN **6M<sup>2</sup>** COMPARED  
TO ONLY **6%** OF OCULUS PLAYERS  
(PAGE 5)



**14.9%** OF OCULUS PLAYERS  
USE **3** SENSORS AND **80.9%**  
USE **2** SENSORS  
(PAGE 6)



OCULUS TRACKING IS IMPROVED  
**2X** WITH **3** SENSORS COMPARED TO  
**2** SENSORS  
(PAGE 6)



**10.9%** OF STEAM PLAYERS ARE  
FROM CHINA COMPARED TO  
**0.3%** OF OCULUS PLAYERS  
(PAGE 4)



AVERAGE SESSION LENGTH OF  
**28 MINUTES** IS THE SAME FOR  
STEAM AND OCULUS.  
(PAGE 4)



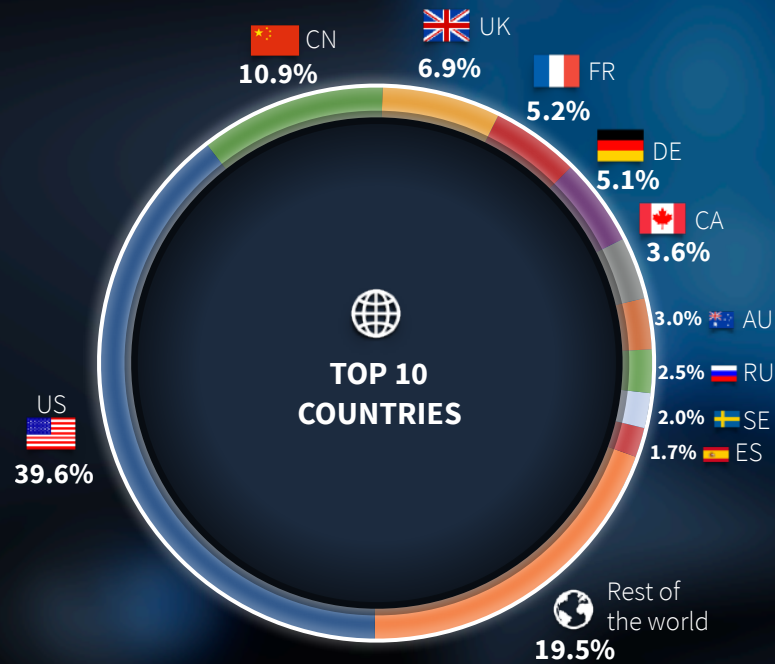
**15.1%** OF OCULUS PLAYERS USE  
AMD CPUs COMPARED TO **7.6%**  
OF STEAM PLAYERS  
(PAGE 7)



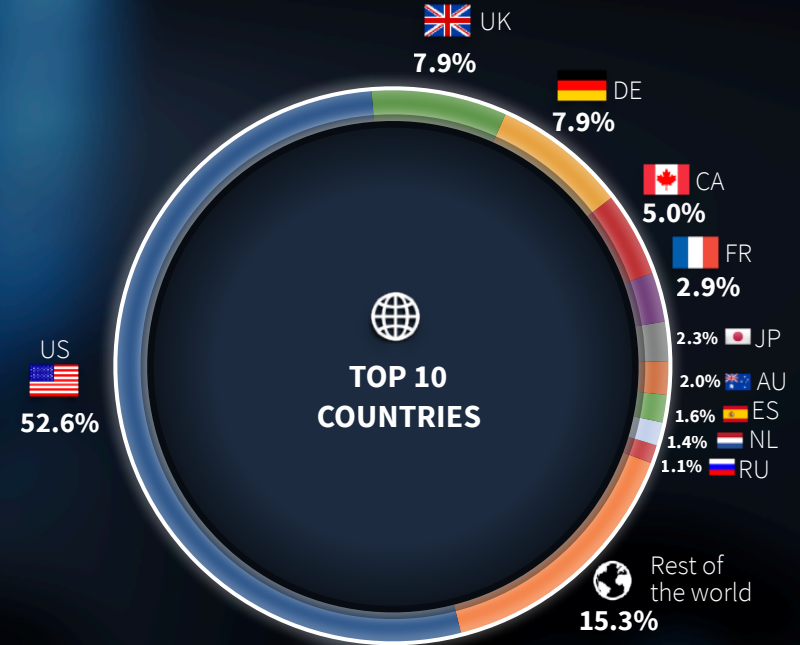
OCULUS PLAYERS EXPERIENCE  
**2X** MORE TRACKING LOSS THAN  
STEAM PLAYERS  
(PAGE 6)



# AUDIENCE



**AVERAGE SESSION LENGTH**  
**28 min & 51 sec**



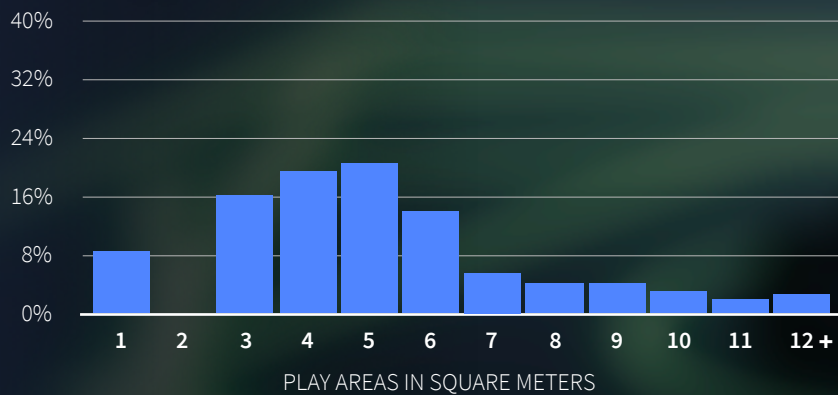
**AVERAGE SESSION LENGTH**  
**28 min & 25 sec**



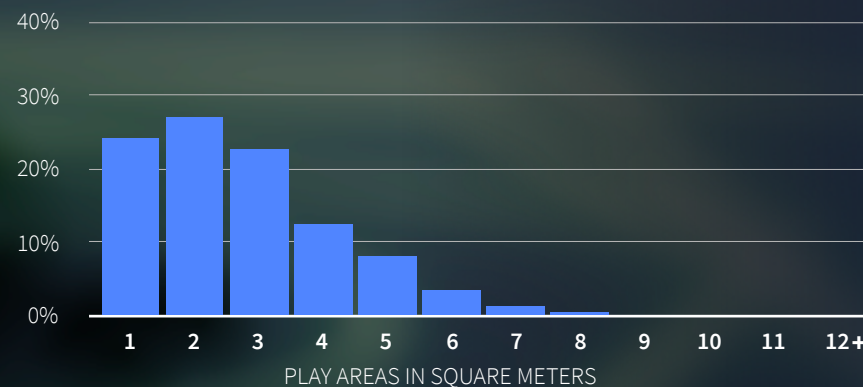
# PLAY AREAS



## STEAM VR PLAY AREA DISTRIBUTION



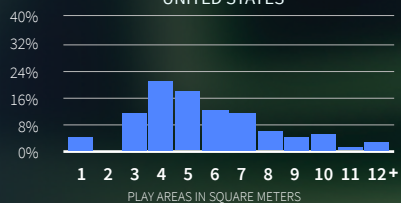
## OCULUS PLAY AREA DISTRIBUTION



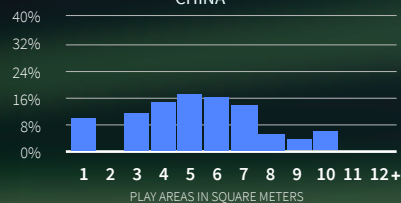
## PLAY AREAS FOR TOP 3 COUNTRIES



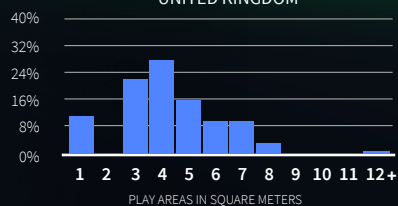
1) UNITED STATES



2) CHINA



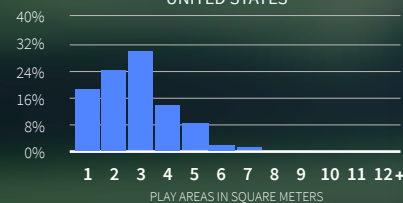
3) UNITED KINGDOM



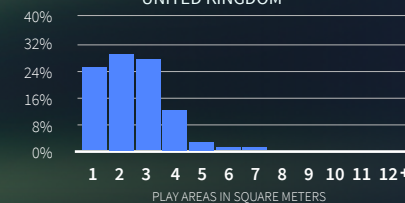
## PLAY AREAS FOR TOP 3 COUNTRIES



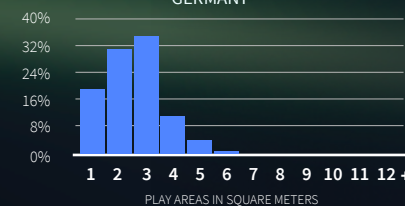
1) UNITED STATES



2) UNITED KINGDOM

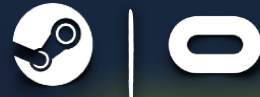


3) GERMANY



# TRACKING LOSS

CALCULATED BASED ON HOW VR SDKS REPORT TRACKING LOSS PER FRAME



## OVERALL AVERAGE

This represents the average tracking loss across all scenes of the experience. The scenes below are select parts of the experience, illustrating how the design of a virtual world can impact tracking loss.



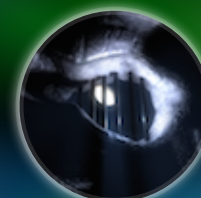
**2.7**  
seconds lost per minute



**5.1**  
seconds lost per minute



**0.8**  
seconds lost per minute



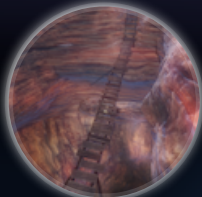
**5.6**  
seconds lost per minute

## THE CELL

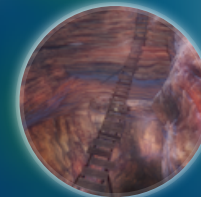
This scene contains a secret ring that users can discover hidden in a hole in one of the walls. It requires a relatively large play area to reach.

## ELEVATED

Elevated places users on a narrow bridge over a deep chasm. There are small rocks by the user's feet that can be thrown into the abyss. Reaching close to the floor can often lead to loss of tracking.



**1.9**  
seconds lost per minute



**6.1**  
seconds lost per minute

## THE TRIAL

The Trial places users in another dimension where their physical movements are observed and commented on by ominous humanoid characters. It does not require a large play area, but the scene design encourages users to turn in a full circle (requiring 360 tracking).

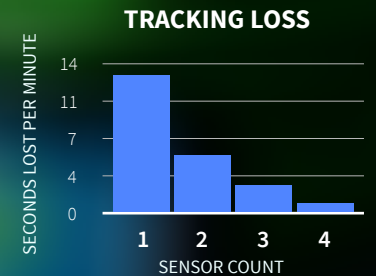


**1.1**  
seconds lost per minute

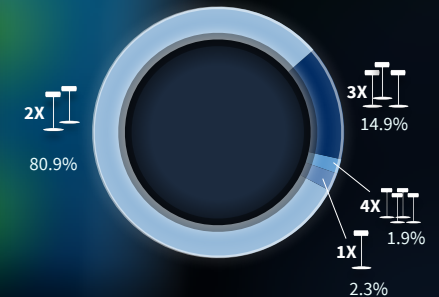


**10.5**  
seconds lost per minute

## CONSTELLATION SENSORS



## OWNERSHIP OF SENSORS

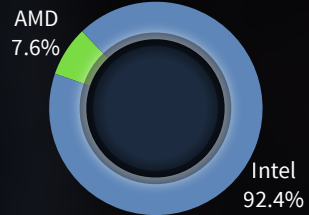




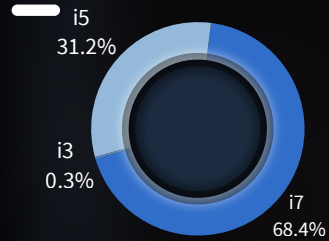
# HARDWARE



## CPU MANUFACTURERS



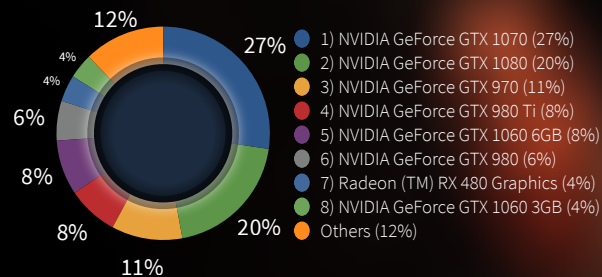
## INTEL CPU TYPES



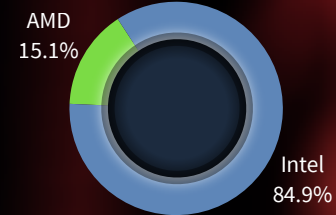
## GPU CHIPSETS



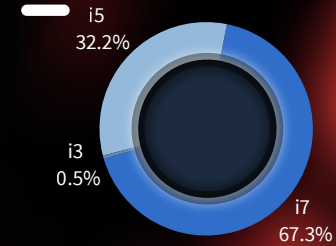
## GPU TYPES



## CPU MANUFACTURERS



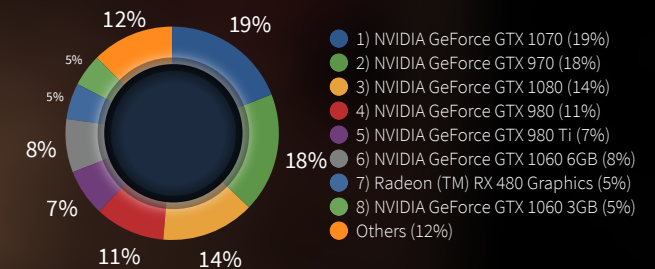
## INTEL CPU TYPES



## GPU CHIPSETS



## GPU TYPES



# BEHAVIOR



PHYSICAL MOVEMENT

**10.3**

meters per minute



INTERACTIONS

**14**

button presses per minute



GAZE

**2255°**

degrees per minute



PHYSICAL MOVEMENT

**8.4**

meters per minute



INTERACTIONS

**16**

button presses per minute



GAZE

**2143°**

degrees per minute



# GAMEPLAY ACTIONS



PLAYED THE TRUMPET

**41%**



SHOT APPRENTICE

**15%**



CROUCHED BY TABLE

**75%**



THREW SKULLY OUT THE WINDOW

**5%**



LAI D DOWN ON THE FLOOR

**1.4%**



PLAYED THE TRUMPET

**37%**



SHOT APPRENTICE

**23%**



CROUCHED BY TABLE

**55%**



THREW SKULLY OUT THE WINDOW

**4%**



LAI D DOWN ON THE FLOOR

**0.7%**



# GHOSTLINE ANALYTICS FOR VR

The grand vision for immersive experiences are believable worlds that make users feel as if transported to another reality. These are the types of experiences that Aldin has been striving towards since 2013, and the company has seen first hand just how many challenges there are in achieving even the simplest implementations of that vision. Interactive virtual realities are more complex than conventional software; they need to work with a diverse range of hardware, and take real-world factors into account such as user stature, physical agility and play area sizes.



Designing for VR and physical immersion is largely uncharted territory, presenting an entirely new range of development challenges and design factors. As a developer you have the power to invoke deeply emotional sensations as well as to cause unintentional physical discomfort. The smallest of details can make or break an experience. For this reason it is absolutely vital to pay careful attention to the user experience and ensure that your content is having the exact impact that you envision.

Ghostline revolutionizes the VR production process, measuring and visualizing new factors in VR user engagement to help ensure that the broadest range of users are having the best experience possible. For any type of VR content being created, Ghostline targets development efforts and offers invaluable insights into the complex relationship between user behavior, content design and VR system setups.



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